

SEQUENCE LISTING

<110> Markham and Bonthron

<120> Wound Healing and Orofacial Clefting

<130> 59367

<140> 09/869,564

<141> 2001-06-29

<150> PCT/GB00/00003

<151> 2000-01-06

<150> GB9900167.9

<151> 1999-01-06

<160> 39

<170> PatentIn Ver. 2.1

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| | | | Met | Glu | Arg | Arg | Ser | Glu | Ser | Pro | Cys | |
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| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| ctg | cgg | gac | agc | ccc | gac | cgg | cgg | agc | ggc | agc | ccg | gac | gtc | aag | ggg | 159 |
| Leu | Arg | Asp | Ser | Pro | Asp | Arg | Arg | Ser | Gly | Ser | Pro | Asp | Val | Lys | Gly | |
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| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| cct | ccc | cca | gtg | aag | gtg | gcc | cgg | ctg | gag | cag | aac | ggc | agc | ccc | atg | 207 |
| Pro | Pro | Pro | Val | Lys | Val | Ala | Arg | Leu | Glu | Gln | Asn | Gly | Ser | Pro | Met | |
| | | | 30 | | | | 35 | | | | | | 40 | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| gga | gcc | cgc | ggg | agg | ccc | aac | ggc | gcc | gtg | gcc | aag | gcc | gtg | gga | ggt | 255 |
| Gly | Ala | Arg | Gly | Arg | Pro | Asn | Gly | Ala | Val | Ala | Lys | Ala | Val | Gly | Gly | |
| | | | 45 | | | | 50 | | | | | 55 | | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| ttg | atg | att | cct | gtc | ttt | tgt | gtc | gtg | gag | cag | ttg | gac | ggc | tct | ctt | 303 |
| Leu | Met | Ile | Pro | Val | Phe | Cys | Val | Val | Glu | Gln | Leu | Asp | Gly | Ser | Leu | |
| | | 60 | | | | 65 | | | | | 70 | | | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| gaa | tat | gac | aac | aga | gaa | gaa | cac | gcc | gag | ttt | gtc | ctg | gtg | cgg | aaa | 351 |
| Glu | Tyr | Asp | Asn | Arg | Glu | Glu | His | Ala | Glu | Phe | Val | Leu | Val | Arg | Lys | |
| | 75 | | | | | 80 | | | | | 85 | | | | | |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| gat | gtg | ctt | ttt | agc | cag | ctg | gtg | gag | act | gcg | ctc | ctg | gcc | ctg | ggg | 399 |
| Asp | Val | Leu | Phe | Ser | Gln | Leu | Val | Glu | Thr | Ala | Leu | Leu | Ala | Leu | Gly | |
| 90 | | | | | 95 | | | | | 100 | | | | | 105 | |
| tat | tct | cac | agc | tct | gcg | gcc | cag | gcc | caa | gga | ata | atc | aag | ctg | gga | 447 |
| Tyr | Ser | His | Ser | Ser | Ala | Ala | Gln | Ala | Gln | Gly | Ile | Ile | Lys | Leu | Gly | |
| | | | | 110 | | | | | 115 | | | | | 120 | | |
| agg | tgg | aac | cct | ctc | ccc | ctc | agt | tat | gtg | aca | gat | gca | ccc | gac | gcg | 495 |
| Arg | Trp | Asn | Pro | Leu | Pro | Leu | Ser | Tyr | Val | Thr | Asp | Ala | Pro | Asp | Ala | |
| | | | 125 | | | | | 130 | | | | | 135 | | | |
| aca | gtg | gcc | gac | atg | cta | caa | gat | gtc | tat | cat | gtt | gtg | acg | ttg | aaa | 543 |
| Thr | Val | Ala | Asp | Met | Leu | Gln | Asp | Val | Tyr | His | Val | Val | Thr | Leu | Lys | |
| | | 140 | | | | | 145 | | | | | 150 | | | | |
| atc | caa | tta | caa | agt | tgt | tca | aag | ttg | gaa | gac | ttg | cct | gcg | gag | cag | 591 |
| Ile | Gln | Leu | Gln | Ser | Cys | Ser | Lys | Leu | Glu | Asp | Leu | Pro | Ala | Glu | Gln | |
| | 155 | | | | | 160 | | | | | 165 | | | | | |
| tgg | aac | cat | gcc | aca | gtc | cgc | aat | gcc | tta | aag | gaa | ctg | ctc | aaa | gag | 639 |
| Trp | Asn | His | Ala | Thr | Val | Arg | Asn | Ala | Leu | Lys | Glu | Leu | Leu | Lys | Glu | |
| 170 | | | | | 175 | | | | 180 | | | | | 185 | | |
| atg | aac | cag | agc | aca | tta | gcc | aaa | gaa | tgc | cct | ctc | tcc | cag | agt | atg | 687 |
| Met | Asn | Gln | Ser | Thr | Leu | Ala | Lys | Glu | Cys | Pro | Leu | Ser | Gln | Ser | Met | |
| | | | | 190 | | | | 195 | | | | | | 200 | | |
| att | tca | tcc | att | gta | aat | agc | aca | tat | tat | gcc | aat | gtg | tca | gca | acc | 735 |
| Ile | Ser | Ser | Ile | Val | Asn | Ser | Thr | Tyr | Tyr | Ala | Asn | Val | Ser | Ala | Thr | |
| | | | 205 | | | | | 210 | | | | | 215 | | | |
| aag | tgc | cag | gag | ttt | ggg | aga | tgg | tat | aaa | aag | tac | aag | aag | att | aaa | 783 |
| Lys | Cys | Gln | Glu | Phe | Gly | Arg | Trp | Tyr | Lys | Lys | Tyr | Lys | Lys | Ile | Lys | |
| | | 220 | | | | | 225 | | | | | 230 | | | | |
| gtg | gaa | aga | gtg | gaa | cga | gaa | aac | ctt | tca | gac | tat | tgt | gtt | ctg | ggc | 831 |
| Val | Glu | Arg | Val | Glu | Arg | Glu | Asn | Leu | Ser | Asp | Tyr | Cys | Val | Leu | Gly | |
| | 235 | | | | | 240 | | | | | 245 | | | | | |
| cag | cgt | cca | atg | cat | tta | cca | aat | atg | aac | cag | ctg | gca | tcc | ctg | ggg | 879 |
| Gln | Arg | Pro | Met | His | Leu | Pro | Asn | Met | Asn | Gln | Leu | Ala | Ser | Leu | Gly | |
| 250 | | | | | 255 | | | | | 260 | | | | 265 | | |
| aaa | acc | aac | gaa | cag | tct | cct | cac | agc | caa | att | cac | cac | agt | act | cca | 927 |
| Lys | Thr | Asn | Glu | Gln | Ser | Pro | His | Ser | Gln | Ile | His | His | Ser | Thr | Pro | |
| | | | | 270 | | | | | 275 | | | | | 280 | | |
| atc | cga | aac | caa | gtg | ccc | gca | tta | cag | ccc | atc | atg | agc | cct | ggg | ctt | 975 |
| Ile | Arg | Asn | Gln | Val | Pro | Ala | Leu | Gln | Pro | Ile | Met | Ser | Pro | Gly | Leu | |
| | | | 285 | | | | | 290 | | | | | 295 | | | |
| ctt | tct | ccc | cag | ctt | agt | cca | caa | ctt | gta | agg | caa | caa | ata | gcc | atg | 1023 |
| Leu | Ser | Pro | Gln | Leu | Ser | Pro | Gln | Leu | Val | Arg | Gln | Gln | Ile | Ala | Met | |
| | | 300 | | | | | 305 | | | | | 310 | | | | |
| gcc | cat | ctg | ata | aac | caa | cag | att | gcc | gtt | agc | cgg | ctc | ctg | gct | cac | 1071 |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Ala | His | Leu | Ile | Asn | Gln | Gln | Ile | Ala | Val | Ser | Arg | Leu | Leu | Ala | His | |
| 315 | | | | | | 320 | | | | | 325 | | | | | |
| cag | cat | cct | caa | gcc | atc | aac | cag | cag | ttc | ctg | aac | cat | cca | ccc | atc | 1119 |
| Gln | His | Pro | Gln | Ala | Ile | Asn | Gln | Gln | Phe | Leu | Asn | His | Pro | Pro | Ile | |
| 330 | | | | | 335 | | | | | 340 | | | | | 345 | |
| ccc | aga | gca | gtt | aag | cca | gag | cca | acc | aac | tct | tcc | gtg | gaa | gtc | tct | 1167 |
| Pro | Arg | Ala | Val | Lys | Pro | Glu | Pro | Thr | Asn | Ser | Ser | Val | Glu | Val | Ser | |
| | | | | 350 | | | | | 355 | | | | | 360 | | |
| cca | gat | atc | tac | cag | caa | gtc | aga | gat | gag | ctg | aag | agg | gcc | agt | gtg | 1215 |
| Pro | Asp | Ile | Tyr | Gln | Gln | Val | Arg | Asp | Glu | Leu | Lys | Arg | Ala | Ser | Val | |
| | | | 365 | | | | | 370 | | | | | 375 | | | |
| tcc | caa | gct | gtc | ttt | gca | aga | gtg | gca | ttc | aac | cgc | aca | cag | gga | ttg | 1263 |
| Ser | Gln | Ala | Val | Phe | Ala | Arg | Val | Ala | Phe | Asn | Arg | Thr | Gln | Gly | Leu | |
| | | 380 | | | | | 385 | | | | | 390 | | | | |
| ttg | tct | gag | att | ctg | cgt | aag | gaa | gaa | gac | cct | cgg | aca | gcc | tct | cag | 1311 |
| Leu | Ser | Glu | Ile | Leu | Arg | Lys | Glu | Glu | Asp | Pro | Arg | Thr | Ala | Ser | Gln | |
| | | 395 | | | | 400 | | | | | 405 | | | | | |
| tct | ctt | cta | gta | aac | ctg | agg | gcc | atg | cag | aat | ttc | ctc | aat | ctg | cca | 1359 |
| Ser | Leu | Leu | Val | Asn | Leu | Arg | Ala | Met | Gln | Asn | Phe | Leu | Asn | Leu | Pro | |
| 410 | | | | | 415 | | | | | 420 | | | | | 425 | |
| gaa | gtg | gag | cga | gat | cgc | atc | tac | cag | gat | gag | agg | gag | cgg | agc | atg | 1407 |
| Glu | Val | Glu | Arg | Asp | Arg | Ile | Tyr | Gln | Asp | Glu | Arg | Glu | Arg | Ser | Met | |
| | | | | 430 | | | | | 435 | | | | | 440 | | |
| aat | ccc | aat | gtg | agc | atg | gtc | tcc | tcg | gcc | tcc | agc | agt | ccc | agc | tcc | 1455 |
| Asn | Pro | Asn | Val | Ser | Met | Val | Ser | Ser | Ala | Ser | Ser | Ser | Pro | Ser | Ser | |
| | | | 445 | | | | | 450 | | | | | 455 | | | |
| tcc | cga | acc | cct | cag | gcc | aaa | acc | tcg | aca | ccg | aca | aca | gac | ctc | cct | 1503 |
| Ser | Arg | Thr | Pro | Gln | Ala | Lys | Thr | Ser | Thr | Pro | Thr | Thr | Asp | Leu | Pro | |
| | | 460 | | | | | 465 | | | | | 470 | | | | |
| att | aag | gtg | gac | ggc | gcc | aac | atc | aac | atc | aca | gct | gcc | att | tat | gac | 1551 |
| Ile | Lys | Val | Asp | Gly | Ala | Asn | Ile | Asn | Ile | Thr | Ala | Ala | Ile | Tyr | Asp | |
| | | 475 | | | | 480 | | | | | 485 | | | | | |
| gag | atc | caa | cag | gag | atg | aaa | agg | gcc | aag | gtg | tct | caa | gcc | ctg | ttt | 1599 |
| Glu | Ile | Gln | Gln | Glu | Met | Lys | Arg | Ala | Lys | Val | Ser | Gln | Ala | Leu | Phe | |
| 490 | | | | | 495 | | | | | 500 | | | | | 505 | |
| gcc | aaa | gtg | gct | gca | aat | aaa | agt | cag | ggc | tgg | ctg | tgt | gaa | ctg | ctc | 1647 |
| Ala | Lys | Val | Ala | Ala | Asn | Lys | Ser | Gln | Gly | Trp | Leu | Cys | Glu | Leu | Leu | |
| | | | | 510 | | | | | 515 | | | | | 520 | | |
| cgc | tgg | aag | gag | aac | cca | agc | cca | gaa | aac | cgc | acc | ctc | tgg | gaa | aac | 1695 |
| Arg | Trp | Lys | Glu | Asn | Pro | Ser | Pro | Glu | Asn | Arg | Thr | Leu | Trp | Glu | Asn | |
| | | | 525 | | | | | 530 | | | | | 535 | | | |
| ctc | tgt | acc | atc | cgt | cgc | ttc | ctg | aac | ctt | ccc | cag | cat | gag | agg | gat | 1743 |
| Leu | Cys | Thr | Ile | Arg | Arg | Phe | Leu | Asn | Leu | Pro | Gln | His | Glu | Arg | Asp | |

| 540 | 545 | 550 | |
|--|-----|-----|------|
| gtc atc tat gag gag gag tca agg cat cac cac agc gaa cgc atg caa | | | 1791 |
| Val Ile Tyr Glu Glu Glu Ser Arg His His His Ser Glu Arg Met Gln | | | |
| 555 | 560 | 565 | |
| cac gtg gtc cag ctt ccc cct gag ccg gtg cag gta ctt cat aga cag | | | 1839 |
| His Val Val Gln Leu Pro Pro Glu Pro Val Gln Val Leu His Arg Gln | | | |
| 570 | 575 | 580 | 585 |
| cag tct cag cca gcc aag gag agt tcc cct ccc aga gaa gaa gcg cct | | | 1887 |
| Gln Ser Gln Pro Ala Lys Glu Ser Ser Pro Pro Arg Glu Glu Ala Pro | | | |
| | 590 | 595 | 600 |
| ccc cca cct cct ccg act gaa gac agt tgt gcc aaa aag ccc cgg tct | | | 1935 |
| Pro Pro Pro Pro Pro Thr Glu Asp Ser Cys Ala Lys Lys Pro Arg Ser | | | |
| | 605 | 610 | 615 |
| cgc aca aag atc tcc tta gaa gcc ctg ggg atc ctc caa agc ttt att | | | 1983 |
| Arg Thr Lys Ile Ser Leu Glu Ala Leu Gly Ile Leu Gln Ser Phe Ile | | | |
| | 620 | 625 | 630 |
| cat gat gta ggc ctg tac cca gac cag gaa gcc atc cac act ctt tcg | | | 2031 |
| His Asp Val Gly Leu Tyr Pro Asp Gln Glu Ala Ile His Thr Leu Ser | | | |
| | 635 | 640 | 645 |
| gct cag ctg gat ctc ccc aaa cac acc atc atc aag ttc ttc cag aac | | | 2079 |
| Ala Gln Leu Asp Leu Pro Lys His Thr Ile Ile Lys Phe Phe Gln Asn | | | |
| 650 | 655 | 660 | 665 |
| cag cgg tac cac gtg aag cac cac ggg aag ctg aaa gag cac ctg ggc | | | 2127 |
| Gln Arg Tyr His Val Lys His His Gly Lys Leu Lys Glu His Leu Gly | | | |
| | 670 | 675 | 680 |
| tcc gcg gtg gac gtg gct gaa tat aag gac gag gag ctg ctg acc gag | | | 2175 |
| Ser Ala Val Asp Val Ala Glu Tyr Lys Asp Glu Glu Leu Leu Thr Glu | | | |
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| tca gag gag aac gac agc gag gaa ggc tcc gag gag atg tac aaa gtg | | | 2223 |
| Ser Glu Glu Asn Asp Ser Glu Glu Gly Ser Glu Glu Met Tyr Lys Val | | | |
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| Glu Ala Glu Glu Glu Asn Ala Asp Lys Ser Lys Ala Ala Pro Ala Glu | | | |
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| Ile Asp Gln Arg | | | |
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 Gly Ala Val Ala Lys Ala Val Gly Gly Leu Met Ile Pro Val Phe Cys
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 Val Val Glu Gln Leu Asp Gly Ser Leu Glu Tyr Asp Asn Arg Glu Glu
 65 70 75 80
 His Ala Glu Phe Val Leu Val Arg Lys Asp Val Leu Phe Ser Gln Leu
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 Val Glu Thr Ala Leu Leu Ala Leu Gly Tyr Ser His Ser Ser Ala Ala
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 Gln Ala Gln Gly Ile Ile Lys Leu Gly Arg Trp Asn Pro Leu Pro Leu
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Ser Tyr Val Thr Asp Ala Pro Asp Ala Thr Val Ala Asp Met Leu Gln
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 Asp Val Tyr His Val Val Thr Leu Lys Ile Gln Leu Gln Ser Cys Ser
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 Lys Leu Glu Asp Leu Pro Ala Glu Gln Trp Asn His Ala Thr Val Arg
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 Asn Ala Leu Lys Glu Leu Leu Lys Glu Met Asn Gln Ser Thr Leu Ala
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 Lys Glu Cys Pro Leu Ser Gln Ser Met Ile Ser Ser Ile Val Asn Ser
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 Leu Asn Leu Pro Gln His Glu Arg Asp Val Ile Tyr Glu Glu Glu Ser
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 Arg His His His Ser Glu Arg Met Gln His Val Val Gln Leu Pro Pro
 565 570 575
 Glu Pro Val Gln Val Leu His Arg Gln Gln Ser Gln Pro Ala Lys Glu
 580 585 590
 Ser Ser Pro Pro Arg Glu Glu Ala Pro Pro Pro Pro Pro Pro Thr Glu
 595 600 605
 Asp Ser Cys Ala Lys Lys Pro Arg Ser Arg Thr Lys Ile Ser Leu Glu
 610 615 620
 Ala Leu Gly Ile Leu Gln Ser Phe Ile His Asp Val Gly Leu Tyr Pro
 625 630 635 640
 Asp Gln Glu Ala Ile His Thr Leu Ser Ala Gln Leu Asp Leu Pro Lys
 645 650 655
 His Thr Ile Ile Lys Phe Phe Gln Asn Gln Arg Tyr His Val Lys His
 660 665 670
 His Gly Lys Leu Lys Glu His Leu Gly Ser Ala Val Asp Val Ala Glu
 675 680 685
 Tyr Lys Asp Glu Glu Leu Leu Thr Glu Ser Glu Glu Asn Asp Ser Glu
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 Arg Ser Gly Ser Xaa Asp Val Lys Gly Pro Pro Pro Val Lys Val Ala
 20 25 30
 cgg ctg gag cag aac ggc agc ccc atg gga gcc cgc ggg agg ccc aac 144
 Arg Leu Glu Gln Asn Gly Ser Pro Met Gly Ala Arg Gly Arg Pro Asn
 35 40 45
 ggc gcc gtg gcc aag gcc gtg gga ggt ttg atg att cca gtt ttc tgt 192
 Gly Ala Val Ala Lys Ala Val Gly Gly Leu Met Ile Pro Val Phe Cys
 50 55 60
 gtg gtg gag cag ttg gat ggc tct ctt gaa tac gac aac cga gaa gag 240
 Val Val Glu Gln Leu Asp Gly Ser Leu Glu Tyr Asp Asn Arg Glu Glu
 65 70 75 80
 cac gct gag ttc gtc ttg gtg cgg aaa gat gtg ctt ttt agc cag ctg 288
 His Ala Glu Phe Val Leu Val Arg Lys Asp Val Leu Phe Ser Gln Leu
 85 90 95
 gtg gag acc gcg ctc ctg gcc ctg ggg tat tcc cac agc tct gca gcg 336
 Val Glu Thr Ala Leu Leu Ala Leu Gly Tyr Ser His Ser Ser Ala Ala
 100 105 110
 cag gcc caa gga ata atc aag cta ggg agg tgg aac ccc ctc ccc ctc 384
 Gln Ala Gln Gly Ile Ile Lys Leu Gly Arg Trp Asn Pro Leu Pro Leu
 115 120 125
 agt tat gtg aca gac gcc cct gat gcg act gtg gcc gac atg ctg caa 432
 Ser Tyr Val Thr Asp Ala Pro Asp Ala Thr Val Ala Asp Met Leu Gln
 130 135 140

| | |
|---|------|
| gat gtc tat cac gtt gtg acg ctg aag atc caa tta caa agt tgt tca | 480 |
| Asp Val Tyr His Val Val Thr Leu Lys Ile Gln Leu Gln Ser Cys Ser | |
| 145 150 155 160 | |
| aag ttg gaa gac ttg cct gcg gag caa tgg aac cac gcc acc gtc cgc | 528 |
| Lys Leu Glu Asp Leu Pro Ala Glu Gln Trp Asn His Ala Thr Val Arg | |
| 165 170 175 | |
| aat gcc tta aag gaa ctg ctc aaa gaa atg aac cag agc aca tta gcc | 576 |
| Asn Ala Leu Lys Glu Leu Leu Lys Glu Met Asn Gln Ser Thr Leu Ala | |
| 180 185 190 | |
| aaa gaa tgc cct ctc tcc cag agt atg att tca tcc att gta aat agc | 624 |
| Lys Glu Cys Pro Leu Ser Gln Ser Met Ile Ser Ser Ile Val Asn Ser | |
| 195 200 205 | |
| aca tac tat gcc aat gtg tca gca acc aag tgc cag gag ttt ggg aga | 672 |
| Thr Tyr Tyr Ala Asn Val Ser Ala Thr Lys Cys Gln Glu Phe Gly Arg | |
| 210 215 220 | |
| tgg tac aaa aag tat aag aag ata aaa gtg gaa aga gtg gag cga gag | 720 |
| Trp Tyr Lys Lys Tyr Lys Lys Ile Lys Val Glu Arg Val Glu Arg Glu | |
| 225 230 235 240 | |
| aac ctt tca gac tat tgt gtt ctg ggc cag cgg cca atg cat tta cca | 768 |
| Asn Leu Ser Asp Tyr Cys Val Leu Gly Gln Arg Pro Met His Leu Pro | |
| 245 250 255 | |
| aat atg aac cag ctg gca tcc ctg ggc aaa acc aac gaa cag tct cct | 816 |
| Asn Met Asn Gln Leu Ala Ser Leu Gly Lys Thr Asn Glu Gln Ser Pro | |
| 260 265 270 | |
| cat agc caa atc cac cac agt act cca atc cga aac caa gtg ccc gca | 864 |
| His Ser Gln Ile His His Ser Thr Pro Ile Arg Asn Gln Val Pro Ala | |
| 275 280 285 | |
| ctc cag ccc atc atg agc cct ggt ctt ctc tca ccg cag ctc agt cct | 912 |
| Leu Gln Pro Ile Met Ser Pro Gly Leu Leu Ser Pro Gln Leu Ser Pro | |
| 290 295 300 | |
| cag ctt gtc agg cag caa ata gcc atg gcc cat ctg ata aac caa cag | 960 |
| Gln Leu Val Arg Gln Gln Ile Ala Met Ala His Leu Ile Asn Gln Gln | |
| 305 310 315 320 | |
| ata gcc gtt agc cga ctc ctg gct cac cag cat cct caa gcc atc aac | 1008 |
| Ile Ala Val Ser Arg Leu Leu Ala His Gln His Pro Gln Ala Ile Asn | |
| 325 330 335 | |
| cag cag ttc ttg aac cac cca ccc att ccc aga gca gtt aag cca gag | 1056 |
| Gln Gln Phe Leu Asn His Pro Pro Ile Pro Arg Ala Val Lys Pro Glu | |
| 340 345 350 | |
| cca aca aac tcc tct gtg gaa gtc tct cct gat atc tac cag caa gtt | 1104 |
| Pro Thr Asn Ser Ser Val Glu Val Ser Pro Asp Ile Tyr Gln Gln Val | |
| 355 360 365 | |

| | |
|---|------|
| aga gat gag ttg aag agg gct agt gtg tct caa gct gtc ttt gca aga | 1152 |
| Arg Asp Glu Leu Lys Arg Ala Ser Val Ser Gln Ala Val Phe Ala Arg | |
| 370 375 380 | |
| gtg gca ttc aac cgc aca cag gga tta ttg tca gag ata ctg cgt aag | 1200 |
| Val Ala Phe Asn Arg Thr Gln Gly Leu Leu Ser Glu Ile Leu Arg Lys | |
| 385 390 395 400 | |
| gaa gaa gat ccc agg act gcg tct cag tct ctt cta gta aac ctg agg | 1248 |
| Glu Glu Asp Pro Arg Thr Ala Ser Gln Ser Leu Leu Val Asn Leu Arg | |
| 405 410 415 | |
| gcc atg cag aac ttc ctc aac ctg cct gaa gtg gag cgt gat cgc att | 1296 |
| Ala Met Gln Asn Phe Leu Asn Leu Pro Glu Val Glu Arg Asp Arg Ile | |
| 420 425 430 | |
| tac cag gat gag cga gag agg agc atg aac ccc aat gtg agc atg gtc | 1344 |
| Tyr Gln Asp Glu Arg Glu Arg Ser Met Asn Pro Asn Val Ser Met Val | |
| 435 440 445 | |
| tcc tct gcc tct agc agt ccc agc tcc tcc cga acc cca cag gcc aaa | 1392 |
| Ser Ser Ala Ser Ser Ser Pro Ser Ser Ser Arg Thr Pro Gln Ala Lys | |
| 450 455 460 | |
| acc tcg aca ccg aca aca gac ctc cct att aag gtg gac ggc gcc aac | 1440 |
| Thr Ser Thr Pro Thr Thr Asp Leu Pro Ile Lys Val Asp Gly Ala Asn | |
| 465 470 475 480 | |
| gtc aac atc aca gct gcc att tat gac gag atc caa cag gag atg aaa | 1488 |
| Val Asn Ile Thr Ala Ala Ile Tyr Asp Glu Ile Gln Gln Glu Met Lys | |
| 485 490 495 | |
| aga gcc aag gtg tct caa gcc ctg ttt gcc aaa gtg gct gca aac aaa | 1536 |
| Arg Ala Lys Val Ser Gln Ala Leu Phe Ala Lys Val Ala Ala Asn Lys | |
| 500 505 510 | |
| agt cag ggc tgg ctt tgc gaa ctg ctt cgt tgg aag gag aac ccc agc | 1584 |
| Ser Gln Gly Trp Leu Cys Glu Leu Leu Arg Trp Lys Glu Asn Pro Ser | |
| 515 520 525 | |
| cca gaa aac cgc acc ctt tgg gag aat ctc tgc acc atc cgc cgt ttc | 1632 |
| Pro Glu Asn Arg Thr Leu Trp Glu Asn Leu Cys Thr Ile Arg Arg Phe | |
| 530 535 540 | |
| ctg aat ctt ccc caa cat gag cgg gat gtg atc tat gag gaa gaa tct | 1680 |
| Leu Asn Leu Pro Gln His Glu Arg Asp Val Ile Tyr Glu Glu Glu Ser | |
| 545 550 555 560 | |
| cga cat cac cac agt gaa cgc atg cag cat gtg gtc cag ctc cca cct | 1728 |
| Arg His His His Ser Glu Arg Met Gln His Val Val Gln Leu Pro Pro | |
| 565 570 575 | |
| gag ccc gtg cag gtc ctt cat cga cag cag tcc cag cca act aag gag | 1776 |
| Glu Pro Val Gln Val Leu His Arg Gln Gln Ser Gln Pro Thr Lys Glu | |
| 580 585 590 | |
| agc tcc cct ccc aga gaa gaa gca ccc cca ccg cct cct cca aca gaa | 1824 |

| | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| Ser | Ser | Pro | Pro | Arg | Glu | Glu | Ala | Pro | Pro | Pro | Pro | Pro | Pro | Thr | Glu | |
| | | 595 | | | | | 600 | | | | | 605 | | | | |
| gac | agc | tgt | gcc | aaa | aag | cct | cgg | tct | cgc | aca | aag | atc | tct | ttg | gaa | 1872 |
| Asp | Ser | Cys | Ala | Lys | Lys | Pro | Arg | Ser | Arg | Thr | Lys | Ile | Ser | Leu | Glu | |
| | 610 | | | | | 615 | | | | | 620 | | | | | |
| gcc | ctg | ggc | atc | ctt | caa | agc | ttc | atc | cat | gat | gta | ggc | ctc | tat | ccc | 1920 |
| Ala | Leu | Gly | Ile | Leu | Gln | Ser | Phe | Ile | His | Asp | Val | Gly | Leu | Tyr | Pro | |
| | 625 | | | | 630 | | | | | 635 | | | | | 640 | |
| gac | cag | gaa | gcc | atc | cac | aca | ctc | tcc | gcc | cag | ctg | gat | ctc | ccc | aaa | 1968 |
| Asp | Gln | Glu | Ala | Ile | His | Thr | Leu | Ser | Ala | Gln | Leu | Asp | Leu | Pro | Lys | |
| | | | | 645 | | | | | 650 | | | | | 655 | | |
| cac | acc | atc | atc | aag | ttc | ttc | cag | aac | cag | agg | tac | cac | gtg | aag | cac | 2016 |
| His | Thr | Ile | Ile | Lys | Phe | Phe | Gln | Asn | Gln | Arg | Tyr | His | Val | Lys | His | |
| | | 660 | | | | | 665 | | | | | | 670 | | | |
| cac | ggg | aag | ctg | aaa | gag | cac | ctg | ggc | tcc | gcg | gtg | gac | gtg | gct | gaa | 2064 |
| His | Gly | Lys | Leu | Lys | Glu | His | Leu | Gly | Ser | Ala | Val | Asp | Val | Ala | Glu | |
| | | 675 | | | | | 680 | | | | | 685 | | | | |
| tat | aag | gac | gag | gag | ctg | ctg | acc | gag | tca | gag | gag | aac | gac | agc | gag | 2112 |
| Tyr | Lys | Asp | Glu | Glu | Leu | Leu | Thr | Glu | Ser | Glu | Glu | Asn | Asp | Ser | Glu | |
| | 690 | | | | | 695 | | | | | 700 | | | | | |
| gaa | ggc | tcc | gag | gag | atg | tac | aaa | gtg | gag | gct | gag | gag | gaa | aat | gct | 2160 |
| Glu | Gly | Ser | Glu | Glu | Met | Tyr | Lys | Val | Glu | Ala | Glu | Glu | Glu | Asn | Ala | |
| | 705 | | | | 710 | | | | 715 | | | | | 720 | | |
| gac | aaa | agc | aag | gca | gca | cct | gcc | gaa | att | gac | cag | aga | taa | | | 2202 |
| Asp | Lys | Ser | Lys | Ala | Ala | Pro | Ala | Glu | Ile | Asp | Gln | Arg | | | | |
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<212> PRT

<213> Mus musculus

<220>

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<223> Xaa represents any amino acid

<400> 4

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| Met | Glu | Arg | Arg | Ser | Glu | Ser | Pro | Cys | Leu | Arg | Asp | Ser | Pro | Asp | Arg |
| 1 | | | | 5 | | | | | 10 | | | | | 15 | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Ser | Gly | Ser | Xaa | Asp | Val | Lys | Gly | Pro | Pro | Pro | Val | Lys | Val | Ala |
| | | 20 | | | | | | 25 | | | | | 30 | | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Arg | Leu | Glu | Gln | Asn | Gly | Ser | Pro | Met | Gly | Ala | Arg | Gly | Arg | Pro | Asn |
| | | 35 | | | | | 40 | | | | | 45 | | | |

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Ala | Val | Ala | Lys | Ala | Val | Gly | Gly | Leu | Met | Ile | Pro | Val | Phe | Cys |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

| 50 | | | | | 55 | | | | | 60 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Val | Glu | Gln | Leu | Asp | Gly | Ser | Leu | Glu | Tyr | Asp | Asn | Arg | Glu | Glu |
| 65 | | | | | 70 | | | | | 75 | | | | | 80 |
| His | Ala | Glu | Phe | Val | Leu | Val | Arg | Lys | Asp | Val | Leu | Phe | Ser | Gln | Leu |
| | | | | 85 | | | | | 90 | | | | | 95 | |
| Val | Glu | Thr | Ala | Leu | Leu | Ala | Leu | Gly | Tyr | Ser | His | Ser | Ser | Ala | Ala |
| | | | 100 | | | | | 105 | | | | | | 110 | |
| Gln | Ala | Gln | Gly | Ile | Ile | Lys | Leu | Gly | Arg | Trp | Asn | Pro | Leu | Pro | Leu |
| | | 115 | | | | | 120 | | | | | 125 | | | |
| Ser | Tyr | Val | Thr | Asp | Ala | Pro | Asp | Ala | Thr | Val | Ala | Asp | Met | Leu | Gln |
| | 130 | | | | | 135 | | | | | 140 | | | | |
| Asp | Val | Tyr | His | Val | Val | Thr | Leu | Lys | Ile | Gln | Leu | Gln | Ser | Cys | Ser |
| 145 | | | | | | 150 | | | | | 155 | | | | 160 |
| Lys | Leu | Glu | Asp | Leu | Pro | Ala | Glu | Gln | Trp | Asn | His | Ala | Thr | Val | Arg |
| | | | 165 | | | | | | 170 | | | | | 175 | |
| Asn | Ala | Leu | Lys | Glu | Leu | Leu | Lys | Glu | Met | Asn | Gln | Ser | Thr | Leu | Ala |
| | | 180 | | | | | | 185 | | | | | | 190 | |
| Lys | Glu | Cys | Pro | Leu | Ser | Gln | Ser | Met | Ile | Ser | Ser | Ile | Val | Asn | Ser |
| | | 195 | | | | | 200 | | | | | 205 | | | |
| Thr | Tyr | Tyr | Ala | Asn | Val | Ser | Ala | Thr | Lys | Cys | Gln | Glu | Phe | Gly | Arg |
| | 210 | | | | | 215 | | | | | 220 | | | | |
| Trp | Tyr | Lys | Lys | Tyr | Lys | Lys | Ile | Lys | Val | Glu | Arg | Val | Glu | Arg | Glu |
| 225 | | | | | | 230 | | | | | 235 | | | | 240 |
| Asn | Leu | Ser | Asp | Tyr | Cys | Val | Leu | Gly | Gln | Arg | Pro | Met | His | Leu | Pro |
| | | | 245 | | | | | | 250 | | | | | 255 | |
| Asn | Met | Asn | Gln | Leu | Ala | Ser | Leu | Gly | Lys | Thr | Asn | Glu | Gln | Ser | Pro |
| | | | 260 | | | | | 265 | | | | | 270 | | |
| His | Ser | Gln | Ile | His | His | Ser | Thr | Pro | Ile | Arg | Asn | Gln | Val | Pro | Ala |
| | | 275 | | | | | 280 | | | | | 285 | | | |
| Leu | Gln | Pro | Ile | Met | Ser | Pro | Gly | Leu | Leu | Ser | Pro | Gln | Leu | Ser | Pro |
| | 290 | | | | | 295 | | | | | 300 | | | | |
| Gln | Leu | Val | Arg | Gln | Gln | Ile | Ala | Met | Ala | His | Leu | Ile | Asn | Gln | Gln |
| 305 | | | | | | 310 | | | | | 315 | | | | 320 |
| Ile | Ala | Val | Ser | Arg | Leu | Leu | Ala | His | Gln | His | Pro | Gln | Ala | Ile | Asn |
| | | | 325 | | | | | | 330 | | | | | 335 | |
| Gln | Gln | Phe | Leu | Asn | His | Pro | Pro | Ile | Pro | Arg | Ala | Val | Lys | Pro | Glu |
| | | | 340 | | | | | 345 | | | | | 350 | | |
| Pro | Thr | Asn | Ser | Ser | Val | Glu | Val | Ser | Pro | Asp | Ile | Tyr | Gln | Gln | Val |

| | | | | |
|-------------------------|---------------------|---------------------|-----|-----|
| 355 | | 360 | | 365 |
| Arg Asp Glu Leu Lys Arg | Ala Ser Val Ser Gln | Ala Val Phe Ala Arg | | |
| 370 | 375 | 380 | | |
| Val Ala Phe Asn Arg Thr | Gln Gly Leu Leu Ser | Glu Ile Leu Arg Lys | | |
| 385 | 390 | 395 | 400 | |
| Glu Glu Asp Pro Arg Thr | Ala Ser Gln Ser Leu | Leu Val Asn Leu Arg | | |
| | 405 | 410 | 415 | |
| Ala Met Gln Asn Phe Leu | Asn Leu Pro Glu Val | Glu Arg Asp Arg Ile | | |
| | 420 | 425 | 430 | |
| Tyr Gln Asp Glu Arg Glu | Arg Ser Met Asn Pro | Asn Val Ser Met Val | | |
| | 435 | 440 | 445 | |
| Ser Ser Ala Ser Ser Ser | Pro Ser Ser Ser Arg | Thr Pro Gln Ala Lys | | |
| | 455 | 460 | | |
| Thr Ser Thr Pro Thr Thr | Asp Leu Pro Ile Lys | Val Asp Gly Ala Asn | | |
| 465 | 470 | 475 | 480 | |
| Val Asn Ile Thr Ala Ala | Ile Tyr Asp Glu Ile | Gln Gln Glu Met Lys | | |
| | 485 | 490 | 495 | |
| Arg Ala Lys Val Ser Gln | Ala Leu Phe Ala Lys | Val Ala Ala Asn Lys | | |
| | 500 | 505 | 510 | |
| Ser Gln Gly Trp Leu Cys | Glu Leu Leu Arg Trp | Lys Glu Asn Pro Ser | | |
| | 515 | 520 | 525 | |
| Pro Glu Asn Arg Thr Leu | Trp Glu Asn Leu Cys | Thr Ile Arg Arg Phe | | |
| | 530 | 535 | 540 | |
| Leu Asn Leu Pro Gln His | Glu Arg Asp Val Ile | Tyr Glu Glu Glu Ser | | |
| 545 | 550 | 555 | 560 | |
| Arg His His His Ser Glu | Arg Met Gln His Val | Val Val Gln Leu Pro | Pro | |
| | 565 | 570 | 575 | |
| Glu Pro Val Gln Val Leu | His Arg Gln Gln Ser | Gln Pro Thr Lys Glu | | |
| | 580 | 585 | 590 | |
| Ser Ser Pro Pro Arg Glu | Glu Ala Pro Pro Pro | Pro Pro Thr Glu | | |
| | 595 | 600 | 605 | |
| Asp Ser Cys Ala Lys Lys | Pro Arg Ser Arg Thr | Lys Ile Ser Leu Glu | | |
| | 610 | 615 | 620 | |
| Ala Leu Gly Ile Leu Gln | Ser Phe Ile His Asp | Val Gly Leu Tyr Pro | | |
| 625 | 630 | 635 | 640 | |
| Asp Gln Glu Ala Ile His | Thr Leu Ser Ala Gln | Leu Asp Leu Pro Lys | | |
| | 645 | 650 | 655 | |
| His Thr Ile Ile Lys Phe | Phe Gln Asn Gln Arg | Tyr His Val Lys His | | |

660

665

670

His Gly Lys Leu Lys Glu His Leu Gly Ser Ala Val Asp Val Ala Glu
 675 680 685

Tyr Lys Asp Glu Glu Leu Leu Thr Glu Ser Glu Glu Asn Asp Ser Glu
 690 695 700

Glu Gly Ser Glu Glu Met Tyr Lys Val Glu Ala Glu Glu Glu Asn Ala
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Asp Lys Ser Lys Ala Ala Pro Ala Glu Ile Asp Gln Arg
 725 730

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18

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22

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 1 5 10 15

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 Arg Ser Gly Ser Pro Asp Val Lys Gly Pro Pro Pro Val Lys Val Ala
 20 25 30

cgg ctg gag cag aac ggc agc ccc atg gga gcc cgc ggg agg ccc aac 144
 Arg Leu Glu Gln Asn Gly Ser Pro Met Gly Ala Arg Gly Arg Pro Asn
 35 40 45

ggc gcc gtg gcc aag gcc gtg gga ggt ttg atg att cct gtc ttt tgt 192
 Gly Ala Val Ala Lys Ala Val Gly Gly Leu Met Ile Pro Val Phe Cys
 50 55 60

gtc gtg gag cag ttg gac ggc tct ctt gaa tat gac aac aga gaa gaa 240
 Val Val Glu Gln Leu Asp Gly Ser Leu Glu Tyr Asp Asn Arg Glu Glu
 65 70 75 80

cac gcc gag ttt gtc ctg gtg cgg aaa gat gtg ctt ttt agc cag ctg 288
 His Ala Glu Phe Val Leu Val Arg Lys Asp Val Leu Phe Ser Gln Leu

| 85 | | | | | | | | | | 90 | | | | | 95 | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| gtg | gag | act | gcg | ctc | ctg | gcc | ctg | ggg | tat | tct | cac | agc | tct | gcg | gcc | 336 | | | | |
| Val | Glu | Thr | Ala | Leu | Leu | Ala | Leu | Gly | Tyr | Ser | His | Ser | Ser | Ala | Ala | | | | | |
| | | | 100 | | | | | 105 | | | | | 110 | | | | | | | |
| cag | gcc | caa | gga | ata | atc | aag | ctg | gga | agg | tgg | aac | cct | ctc | ccc | ctc | 384 | | | | |
| Gln | Ala | Gln | Gly | Ile | Ile | Lys | Leu | Gly | Arg | Trp | Asn | Pro | Leu | Pro | Leu | | | | | |
| | | 115 | | | | | 120 | | | | | 125 | | | | | | | | |
| agt | tat | gtg | aca | gat | gca | ccc | gac | gcg | aca | gtg | gcc | gac | atg | cta | caa | 432 | | | | |
| Ser | Tyr | Val | Thr | Asp | Ala | Pro | Asp | Ala | Thr | Val | Ala | Asp | Met | Leu | Gln | | | | | |
| | 130 | | | | | 135 | | | | | 140 | | | | | | | | | |
| gat | gtc | tat | cat | gtt | gtg | acg | ttg | aaa | atc | caa | tta | caa | agt | tgt | tca | 480 | | | | |
| Asp | Val | Tyr | His | Val | Val | Thr | Leu | Lys | Ile | Gln | Leu | Gln | Ser | Cys | Ser | | | | | |
| 145 | | | | | 150 | | | | | 155 | | | | | 160 | | | | | |
| aag | ttg | gaa | gac | ttg | cct | gcg | gag | cag | tgg | aac | cat | gcc | aca | gtc | cgc | 528 | | | | |
| Lys | Leu | Glu | Asp | Leu | Pro | Ala | Glu | Gln | Trp | Asn | His | Ala | Thr | Val | Arg | | | | | |
| | | | 165 | | | | | 170 | | | | | | 175 | | | | | | |
| aat | gcc | tta | aag | gaa | ctg | ctc | aaa | gag | atg | aac | cag | agc | aca | tta | gcc | 576 | | | | |
| Asn | Ala | Leu | Lys | Glu | Leu | Leu | Lys | Glu | Met | Asn | Gln | Ser | Thr | Leu | Ala | | | | | |
| | | 180 | | | | | | 185 | | | | | 190 | | | | | | | |
| aaa | gaa | tgc | cct | ctc | tcc | cag | agt | atg | att | tca | tcc | att | gta | aat | agc | 624 | | | | |
| Lys | Glu | Cys | Pro | Leu | Ser | Gln | Ser | Met | Ile | Ser | Ser | Ile | Val | Asn | Ser | | | | | |
| | 195 | | | | | 200 | | | | | | 205 | | | | | | | | |
| aca | tat | tat | gcc | aat | gtg | tca | gca | acc | aag | tgc | cag | gag | ttt | ggg | aga | 672 | | | | |
| Thr | Tyr | Tyr | Ala | Asn | Val | Ser | Ala | Thr | Lys | Cys | Gln | Glu | Phe | Gly | Arg | | | | | |
| | 210 | | | | | 215 | | | | | 220 | | | | | | | | | |
| tgg | tat | aaa | aag | tac | aag | aag | att | aaa | gtg | gaa | aga | gtg | gaa | cga | gaa | 720 | | | | |
| Trp | Tyr | Lys | Lys | Tyr | Lys | Lys | Ile | Lys | Val | Glu | Arg | Val | Glu | Arg | Glu | | | | | |
| 225 | | | | | 230 | | | | 235 | | | | | 240 | | | | | | |
| aac | ctt | tca | gac | tat | tgt | gtt | ctg | ggc | cag | cgt | cca | atg | cat | tta | cca | 768 | | | | |
| Asn | Leu | Ser | Asp | Tyr | Cys | Val | Leu | Gly | Gln | Arg | Pro | Met | His | Leu | Pro | | | | | |
| | | | 245 | | | | | 250 | | | | | | 255 | | | | | | |
| aat | atg | aac | cag | ctg | gca | tcc | ctg | ggg | aaa | acc | aac | gaa | cag | tct | cct | 816 | | | | |
| Asn | Met | Asn | Gln | Leu | Ala | Ser | Leu | Gly | Lys | Thr | Asn | Glu | Gln | Ser | Pro | | | | | |
| | | 260 | | | | | 265 | | | | | 270 | | | | | | | | |
| cac | agc | caa | att | cac | cac | agt | act | cca | atc | cga | aac | caa | gtg | ccc | gca | 864 | | | | |
| His | Ser | Gln | Ile | His | His | Ser | Thr | Pro | Ile | Arg | Asn | Gln | Val | Pro | Ala | | | | | |
| | 275 | | | | | 280 | | | | | 285 | | | | | | | | | |
| tta | cag | ccc | atc | atg | agc | cct | ggt | ctt | ctt | tct | ccc | cag | ctt | agt | cca | 912 | | | | |
| Leu | Gln | Pro | Ile | Met | Ser | Pro | Gly | Leu | Leu | Ser | Pro | Gln | Leu | Ser | Pro | | | | | |
| | 290 | | | | | 295 | | | | | 300 | | | | | | | | | |
| caa | ctt | gta | agg | caa | caa | ata | gcc | atg | gcc | cat | ctg | ata | aac | caa | cag | 960 | | | | |
| Gln | Leu | Val | Arg | Gln | Gln | Ile | Ala | Met | Ala | His | Leu | Ile | Asn | Gln | Gln | | | | | |
| 305 | | | | 310 | | | | | 315 | | | | 320 | | | | | | | |

| | |
|---|------|
| att gcc gtt agc cgg ctc ctg gct cac cag cat cct caa gcc atc aac | 1008 |
| Ile Ala Val Ser Arg Leu Leu Ala His Gln His Pro Gln Ala Ile Asn | |
| 325 330 335 | |
| cag cag ttc ctg aac cat cca ccc atc ccc aga gca gtt aag cca gag | 1056 |
| Gln Gln Phe Leu Asn His Pro Pro Ile Pro Arg Ala Val Lys Pro Glu | |
| 340 345 350 | |
| cca acc aac tct tcc gtg gaa gtc tct cca gat atc tac cag caa gtc | 1104 |
| Pro Thr Asn Ser Ser Val Glu Val Ser Pro Asp Ile Tyr Gln Gln Val | |
| 355 360 365 | |
| aga gat gag ctg aag agg gcc agt gtg tcc caa gct gtc ttt gca aga | 1152 |
| Arg Asp Glu Leu Lys Arg Ala Ser Val Ser Gln Ala Val Phe Ala Arg | |
| 370 375 380 | |
| gtg gca ttc aac cgc aca cag gga ttg ttg tct gag att ctg cgt aag | 1200 |
| Val Ala Phe Asn Arg Thr Gln Gly Leu Leu Ser Glu Ile Leu Arg Lys | |
| 385 390 395 400 | |
| gaa gaa gac cct cgg aca gcc tct cag tct ctt cta gta aac ctg agg | 1248 |
| Glu Glu Asp Pro Arg Thr Ala Ser Gln Ser Leu Leu Val Asn Leu Arg | |
| 405 410 415 | |
| gcc atg cag aat ttc ctc aat ctg cca gaa gtg gag cga gat cgc atc | 1296 |
| Ala Met Gln Asn Phe Leu Asn Leu Pro Glu Val Glu Arg Asp Arg Ile | |
| 420 425 430 | |
| tac cag gat gag agg gag cgg agc atg aat ccc aat gtg agc atg gtc | 1344 |
| Tyr Gln Asp Glu Arg Glu Arg Ser Met Asn Pro Asn Val Ser Met Val | |
| 435 440 445 | |
| tcc tcg gcc tcc agc agt ccc agc tcc tcc cga acc cct cag gcc aaa | 1392 |
| Ser Ser Ala Ser Ser Ser Pro Ser Ser Ser Arg Thr Pro Gln Ala Lys | |
| 450 455 460 | |
| acc tcg aca ccg aca aca gac ctc cct att aag gtg gac ggc gcc aac | 1440 |
| Thr Ser Thr Pro Thr Thr Asp Leu Pro Ile Lys Val Asp Gly Ala Asn | |
| 465 470 475 480 | |
| atc aac atc aca gct gcc att tat gac gag atc caa cag gag atg aaa | 1488 |
| Ile Asn Ile Thr Ala Ala Ile Tyr Asp Glu Ile Gln Gln Glu Met Lys | |
| 485 490 495 | |
| agg gcc aag gtg tct caa gcc ctg ttt gcc aaa gtg gct gca aat aaa | 1536 |
| Arg Ala Lys Val Ser Gln Ala Leu Phe Ala Lys Val Ala Ala Asn Lys | |
| 500 505 510 | |
| agt cag ggc tgg ctg tgt gaa ctg ctc cgc tgg aag gag aac cca agc | 1584 |
| Ser Gln Gly Trp Leu Cys Glu Leu Leu Arg Trp Lys Glu Asn Pro Ser | |
| 515 520 525 | |
| cca gaa aac cgc acc ctc tgg gaa aac ctc tgt acc atc cgt cgc ttc | 1632 |
| Pro Glu Asn Arg Thr Leu Trp Glu Asn Leu Cys Thr Ile Arg Arg Phe | |
| 530 535 540 | |

| | |
|---|------|
| ctg aac ctt ccc cag cat gag agg gat gtc atc tat gag gag gag tca | 1680 |
| Leu Asn Leu Pro Gln His Glu Arg Asp Val Ile Tyr Glu Glu Glu Ser | |
| 545 550 555 560 | |
| agg cat cac cac agc gaa cgc atg caa cac gtg gtc cag ctt ccc cct | 1728 |
| Arg His His His Ser Glu Arg Met Gln His Val Val Gln Leu Pro Pro | |
| 565 570 575 | |
| gag ccg gtg cag gta ctt cat aga cag cag tct cag cca gcc aag gag | 1776 |
| Glu Pro Val Gln Val Leu His Arg Gln Gln Ser Gln Pro Ala Lys Glu | |
| 580 585 590 | |
| agt tcc cct ccc aga gaa gaa gcg cct ccc cca cct cct ccg act gaa | 1824 |
| Ser Ser Pro Pro Arg Glu Glu Ala Pro Pro Pro Pro Pro Pro Thr Glu | |
| 595 600 605 | |
| gac agt tgt gcc aaa aag ccc cgg tct cgc aca aag atc tcc tta gaa | 1872 |
| Asp Ser Cys Ala Lys Lys Pro Arg Ser Arg Thr Lys Ile Ser Leu Glu | |
| 610 615 620 | |
| gcc ctg ggg atc ctc caa agc ttt att cat gat gta ggc ctg tac cca | 1920 |
| Ala Leu Gly Ile Leu Gln Ser Phe Ile His Asp Val Gly Leu Tyr Pro | |
| 625 630 635 640 | |
| gac cag gaa gcc atc cac act ctt tcg gct cag ctg gat ctc ccc aaa | 1968 |
| Asp Gln Glu Ala Ile His Thr Leu Ser Ala Gln Leu Asp Leu Pro Lys | |
| 645 650 655 | |
| cac acc atc atc aag ttc ttc cag aac cag cgg tac cac gtg aag cac | 2016 |
| His Thr Ile Ile Lys Phe Phe Gln Asn Gln Arg Tyr His Val Lys His | |
| 660 665 670 | |
| cac ggg aag ctg aaa gag cac ctg ggc tcc gcg gtg gac gtg gct gaa | 2064 |
| His Gly Lys Leu Lys Glu His Leu Gly Ser Ala Val Asp Val Ala Glu | |
| 675 680 685 | |
| tat aag gac gag gag ctg ctg acc gag tca gag gag aac gac agc gag | 2112 |
| Tyr Lys Asp Glu Glu Leu Leu Thr Glu Ser Glu Glu Asn Asp Ser Glu | |
| 690 695 700 | |
| gaa ggc tcc gag gag atg tac aaa gtg gag gct gag gag gaa aat gct | 2160 |
| Glu Gly Ser Glu Glu Met Tyr Lys Val Glu Ala Glu Glu Glu Asn Ala | |
| 705 710 715 720 | |
| gac aaa agc aag gca gca cct gcc gaa att gac cag aga | 2199 |
| Asp Lys Ser Lys Ala Ala Pro Ala Glu Ile Asp Gln Arg | |
| 725 730 | |